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10/619,571

07/16/2003

E. Michael Ackley JR.

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04/06/2005

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EXAMINER

YAN, REN LUO

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/619,571 | Applicant(s) ACKLEY ET AL. | |
| | Examiner Ren L. Yan | Art Unit 2854 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 1-32 and 47-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-35, 38 and 43-46 is/are rejected.
- 7) ☒ Claim(s) 36, 37 and 39-42 is/are objected to.
- 8) ☒ Claim(s) 33-58 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/16/03, 5/14/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's election without traverse of Fig. 3 species with readable claims 33-58 in the reply filed on 1-8-2005 is acknowledged.

Upon careful review of the elected claims 33-58, a further restriction requirement is deemed necessary as in the following:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 33-46, drawn to an image forming apparatus, classified in class 101, subclass 37.
- II. Claims 47-58, drawn to carrier bar, classified in class 198, subclass 384.

The inventions are distinct, each from the other because:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the detailed structure of a carrier bar as recited in the subcombination is not required by the combination claims. The subcombination has separate utility such as being used as part of a conveyor system for handling articles.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, recognized divergent subject matter, and different search, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Mee on 3-28-2005 a provisional election was made with traverse to prosecute the invention of I, claims 33-46. Affirmation of this election must be made by applicant in replying to this Office action. Claims 47-58 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim 37 is objected to because the word "that" on line 4 should be changed to -- than -- so as to correct an apparent oversight.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 33-35, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ream et al((6,267,997) in view of Matsuoka(4,619,196).

The patent to Ream et al teaches an apparatus for forming a registered image on a shaped edible piece as claimed including a transport surface 28 having at least one shaped recess 54 for holding the edible 22 laterally, longitudinally and rotationally within the shaped recess at a predetermined position, a first printer station 32 at a first position along a transport path that

forms a first component image on the shaped piece while in the predetermined position, a second printer station 32 downstream from the first printer station that forms a second component of the composite image on the edible piece in registration with the first component image of the composite image. Ream et al also teach to use vacuum generated by an inherent vacuum pump to maintain the edible piece in the predetermined position within the recess while the edible piece is at and between the first and second print stations such that two or more colors of edible ink can be printed in proper registration on the edible piece. See Figs. 10-14, column 5, lines 12-15, column 8, lines 46-59, column 10, lines 63-64, and claim 1 in Ream et al for details. However, even though Ream et al teach to use vacuum to maintain the edible piece at a predetermined position inside the recess, Ream et al do not clearly show a vacuum hole positioned within the recess as recited. Matsuoka teaches in a tablet printing device the conventional use of a vacuum hole 4 positioned within a recess 3 that communicates with a vacuum device to maintain the tablet at a predetermined position in the recess during the tablet transport and printing operations. See Figs. 4-6 and column 1, lines 12-30 in Matsuoka for example. It would have been obvious to one of ordinary skill in the art to provide the recess of Ream et al with a vacuum hole appropriately disposed in communication with a vacuum device as taught by Matsuoka in order to firmly hold the edible piece in position during the transport and printing operations and to ensure proper color registration of the image printed on the edible piece. With respect to claim 34, the edible piece of Ream et al has a portion that protrudes above the transport surface. However, this portion is not a non-planar portion as recited. Matsuoka teaches to print on tablets each has a non-planar portion that protrudes above the transport surface to be engaged with the print roller during the printing operation. It would have been

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obvious to those having ordinary skill in the art that the image forming apparatus of Ream et al is well capable of printing on edible pieces that have non-planar surfaces and to provide the image forming apparatus of Ream et al with tablet shaped pieces to be printed as taught by Matsuoka would have been an obvious expedient to those having ordinary skill in the art. With respect to claim 44, Ream et al teach to print 120 impressions per minute which is way beyond the 1,000 pieces per hour print output as recited. However, Ream et al do not show a multi-lane system. Matsuoka teaches the use of a multi-lane system for the tablet printer as shown in Fig. 6 to achieve more print output than the single lane system. It would have been obvious to those having ordinary skill in the art to provide the image forming apparatus of Ream et al with a multi-lane system appropriately disposed as taught by Matsuoka in order to increase the print output. With respect to claim 45, the print roller 36 is a rubber roller that picks up an inked image from the design roller 34 and then transfer to the edible piece. Therefore, the printer of Ream et al qualifies as an offset printer as recited. See column 9, lines 13-40 in Ream et al.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ream et al in view of Matsuoka as applied to claim 33 above, and further in view of Yamamoto et al(5,423,252).

Ream et al, as modified by Matsuoka teach all that is claimed except that it does not show a vacuum plenum system as recited. Yamamoto et al teach a printer for printing on tablets and capsules the conventional use of a vacuum plenum system disposed between the shaped recesses and the vacuum pump 133 and below the transport path. See Figs. 1 and 2 in Yamamoto et al for example. It would have been obvious to those having ordinary skill in the art to provide the image forming apparatus of Ream et al, as modified by Matsuoka with a vacuum plenum system

appropriately disposed as taught by Yamamoto et al in order to facilitate maintaining the edible piece in position during the transport and printing operations.

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ream et al in view of Matsuoka as applied to claim 33 above, and further in view of Emerson(2,613,594).

Ream et al, as modified by Matsuoka teach all that is claimed except for the recess portion having a resilient portion. Emerson teaches a printer using a recess for transporting articles to be printed including a resilient portion 74 formed on the recess portion. See Fig. 6 in Emerson for example. It would have been obvious to one of ordinary skill in the art to provide the recess of Ream et al, as modified by Matsuoka with a resilient portion as taught by Emerson so as to provide a cushioning effect to the edible piece during the printing operation.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ream et al in view of Matsuoka as applied to claim 33 above, and further in view of Ackley (4,905,589).

Ream et al, as modified by Matsuoka teach all that is claimed except for the use of an inkjet printer. The use of inkjet printer to print on shaped articles has been well known. The patent to Ackley teaches the conventional use of an inkjet printer 6 for printing on tablets 25. see Fig. 2 in Ackley for example. It would have been obvious to those having ordinary skill in the art to provide the image forming apparatus of Ream et al, as modified by Matsuoka with the digitally controlled inkjet print heads as taught by Ackley in order to precisely print a color image on the edible piece.

Claims 36, 37 and 39-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is an examiner's statement indicating allowable subject matter:

With respect to claim 36, no prior art has been found to teach a vacuum hole positioned on a side wall of the shaped recess in total combination with the image forming apparatus as claimed.

With respect to claim 37, the claimed valve system connected to a vacuum pump that applied a first pressure differential at the print stations and a second pressure differential, less than the first pressure differential, between the print stations in total combination with the image forming apparatus is not taught by the prior art of record.

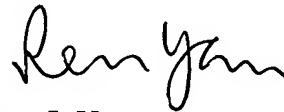
With respect to claim 39, the claimed first, second and third portions of the vacuum plenum system and their respectively positional arrangement in total combination with the image forming apparatus is not taught by the prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L. Yan whose telephone number is 571-272-2173. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ren L Yan
Primary Examiner
Art Unit 2854

Ren Yan
March 29, 2005